

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant : Donald F. Hamilton et al.  
Serial No. : 08/777,958  
Filed : December 24, 1996  
Title : VEHICLE TRUNK WOOFER

Art Unit : 2615  
Examiner : Ping Lee  
Conf. No. : 4029

**Mail Stop Appeal Brief - Patents**

Hon. Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

RESPONSE G TO NOTIFICATION OF NON-COMPLIANT BRIEF DATED APRIL 2, 2009

Responsive to the Notification of Non-Compliant Brief dated April 2, 2009, we enclose AMENDED FIFTH BRIEF omitting whether prosecution was properly reopened under 37 C.F.R. 1.198 because the office action dated July 22, 2008, did not identify "matters not already adjudicated, sufficient cause being shown" nor contain written authority from the Director to reopen prosecution.

The courtesy of Examiner Lee in granting the telephone interview of April 9, 2009, stating that the foregoing omission would overcome the noncompliance of the brief, suggesting a petition as an alternative and acknowledging that she was subject to 37 C.F.R. 1.198 is acknowledged with appreciation.

Please apply any charges or credits to Deposit Account No. 06-1050 under order number 02103-0211002.

9 April 9, 2009  
Date: \_\_\_\_\_

Respectfully submitted,  
FISH & RICHARDSON P.C.  
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AMENDED FIFTH BRIEF ON APPEAL

(i) *Real Party in Interest*

Bose Corporation.

(ii) *Related Appeals and Interferences*

Appeal No. 94-2403 in the parent application and Appeal Nos. 2000-1557 and 2007-3091 in this application may have a bearing on the Board's decision in the pending appeal.

(iii) *Status of Claims*

Claims 2 and 7 have been cancelled. Claims 1, 3-6 and 8-10 being appealed stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement, claims 1, 4-6, 9 and 10 also stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hathaway, U.S. Patent No. 5,394,478 and unpatentable over Hutchins, U.S. Patent No. 4,572,326 as a primary reference in view of Virva U.S. Patent No. 4,164,988 as a secondary reference.

(iv) *Status of Amendments*

No amendments have been filed after the office action of July 22, 2008.

(v) *Summary of Claimed Subject Matter*

Regarding claim 1, the invention comprises an audio speaker system for a vehicle having a passenger compartment, a spare tire compartment, a trunk having a trunk floor, a dividing portion and a rear deck. The dividing portion, such as 11, (FIGS. 1 and 2) and rear deck, such as 3, divide the trunk, such as 7, and the passenger compartment of vehicle 1. The audio speaker system comprises at least one low frequency speaker, such as 9, disposed within the trunk of the vehicle at the trunk rear in a location spaced from the passenger compartment by the portion of the trunk extending to the front of the vehicle such that the at least one speaker is clear of the rear deck, above the trunk floor and outside the spare tire compartment. The at least one speaker is disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume that would occur with the at least one speaker mounted in the rear deck, preferably being disposed in a rear trunk corner at the rear of the vehicle and mounted in an enclosure.

The vehicle audio speaker system is preferably constructed and arranged to be free of an undesirable peak in the rear seat frequency response of the vehicle between 80-100 Hz and free of an undesirable hole between 60-80 Hz in the front seat frequency response of the vehicle. The rear deck, such as 3, is preferably free of speaker holes. Page 2, line 11- page 3, line 25.

(vi) *Grounds of Rejection to be Reviewed on Appeal*

1. Whether claims 1, 3-6 and 8-10 comply with the written description requirement of 35 U.S.C. §112.
2. Whether claims 1, 4-6, 9 and 10 were properly rejected under 35 U.S.C. §103(a) as being unpatentable over Hathaway.
3. Whether claims 1, 4-6, 9 and 10 were properly rejected under 35 U.S.C. §103(a) as being unpatentable over Hutchins as a primary reference in view of Virva as a secondary reference.

(vii) *Argument*

I. THIS APPLICATION HAS BEEN IDENTIFIED AS A "CONTINUING" APPLICATION, NOT "A CONTINUATION OR DIVISIONAL APPLICATION" OF THE PRIOR-FILED APPLICATION.

The office action states, "Applicant states that this application is a continuation or divisional application of the prior-filed application". P.2.

In fact, the first sentence of this application reads, "This is a continuing application of Application Serial No. 07/871,926 filed April 21, 1992." As explained in Wikipedia, "Under United States Patent Law, a continuing patent application is a patent application which follows, and claims priority to, an earlier filed patent application.

For instance, a continuing patent application may be a continuation, divisional, or continuation-in-part application."

This application has been pending for over 12 years, this is the first time the material under "Priority" was raised and is irrelevant to any issue ever involved in the prosecution of this application.

II. THE LANGUAGE IN THE PRIOR DECISION OF THE BOARD OF PATENT APPEALS AND INTERFERENCES FINDING THAT THIS APPLICATION MEETS THE ENABLING REQUIREMENTS OF 35 U.S.C. §112, FIRST PARAGRAPH ALSO SUPPORTS A CONCLUSION THAT THE WRITTEN DESCRIPTION REQUIREMENTS HAVE BEEN MET.

The office action states:

6. Claims 1, 3-6 and 8-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claimed limitation in the instant application "said at least one speaker is disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck" is specified in lines 8-10 of claim 1. The current specification discloses that "the speakers mounted in the rear deck reduce the calculated trunk volume of the vehicle" on lines 19-20 of p.

1, and "the enclosure in the corner of the trunk results in a smaller decrease in calculated useful trunk volume than do speakers mounted in the rear deck" on lines 29-31 of p. 2. Accordingly, the current specification and the drawing as filed on 12/24/1996 only disclose how to compare the useful trunk volume between speakers being mounted on the rear deck and the speaker being disposed in the trunk clear of the rear deck above the trunk floor and outside of the spare tire compartment, but fails to disclose how to compare the calculated useful trunk volume with one speaker being mounted in the rear deck. Therefore, claim 1 introduces new matter which was not described in the specification as originally filed. Pp. 4-5.

The language used by the Board in reversing the first paragraph lack of enablement rejection in the prior decision rebuts the present written description rejection. There the Board said:

*1. 35 U.S.C. § 112, first paragraph, rejection*

The Examiner's position is focused on the presence of information in Appellants' disclosure related to how a low frequency speaker of the size and shape necessary to be employed in the claims may be produced (Ans. 5). The Examiner relies on one of the applied prior art references, Ziffer (March), which identifies Bazooka speakers as the most compact speakers available at the time of invention (*id.*). The Examiner takes the position that since Appellants acknowledge the existence of Bazooka speakers and the large space they occupy when placed in the trunk of a car, such an acknowledgment supports the fact that Appellants' disclosure is non-enabling (Ans. 16).

We agree with Appellants that the above mentioned recognition of the large size of Bazooka speakers does not support the lack of an enabling disclosure (App. Br. 5; Reply Br. 3). Furthermore, as pointed out by Appellants (*id.*), we find that Figure 2 of the instant Specification discloses the placement of the speaker enclosure 9 in the corner of the vehicle trunk occupying negligible useful trunk volume (Spec. 2:17-20) while the trunk as a whole acts as a natural low-pass filter (Spec. 2:25-27). Therefore, in view of the above discussion and considering the presented facts and the arguments made by Appellants and the Examiner, we find that Appellants' disclosure is enabling, and the rejection of claims 1, 3-6, and 8-10 under the first paragraph of 35 U.S.C. § 112 cannot be sustained. Pp. 6-7.

The written description including the drawing discloses, to those skilled in the art how to practice the claimed invention.

III. THE HATHAWAY PATENT IS NO MORE PERTINENT THAN THE PRIOR ART CONSIDERED BY THE BOARD IN REVERSING THE LAST FINAL REJECTION.

The office action states:

9. Claim 1, 4-6, 9 and 10 are-rejected under 35 U.S.C. 103(a) as being unpatentable over Hathaway et al (hereafter Hathaway) (US005394478A). Regarding claim 1, Hathaway discloses an audio speaker system for a vehicle having a passenger compartment (8), a trunk having a trunk floor (Fig. 5), a dividing portion and a rear deck (col. 5, line 2; a sedan inherently includes a dividing portion and a rear deck), said dividing portion and said rear deck dividing the trunk and the passenger compartment, said audio speaker system comprising at least one low frequency speaker (4; col. 1, lines 9-10) disposed within the trunk of the vehicle at the trunk rear (see Fig. 5) in a location spaced from the passenger compartment by the portion of the trunk extending to the front of the vehicle (see Fig. 5) such that said at least one speaker (4) is clear of the rear deck (as shown in Fig. 5, the speaker is not mounted on the deck) above the trunk floor; wherein said at least one speaker is disposed in a rearward section of the trunk occupying negligible useful trunk volume ("without significant reduction of storage space" as stated in col. 5, lines 12-13).

The limitation "occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck" is met by Hathaway's speaker. The term "out-of-the-way corner of the trunk" in Hathaway implies that the corner is an odd shaped corner or a secluded corner of the trunk that it is not convenient or big enough for storage purpose. Based on applicant's disclosure specified from line 32 of p. 2 to line 10 of p. 3 in view of Figs. 5-7, when car manufacturers calculate the trunk's volume, the useful trunk volume does not include the volume at the "out-of-the-way corner of the trunk". Hathaway also states that the placement of the speaker does not significantly reduce the storage space (col. 5, lines 12-13). So, Hathaway's speaker only causes a small percentage of the useful trunk volume decrement. As shown in Fig. 7 of applicant's disclosure, mounting the speaker to the deck would significantly reduce the useful trunk volume available due to the height and the diameter of the speaker, so a suitcase or a big box with sufficient dimension cannot be placed all the way inside the trunk to touch the dividing portion of the car under the rear deck. Therefore, based on applicant's disclosure, by placing the speaker as disclosed in Fig. 5 in an out-of-the-way corner of the trunk without significant reduction of storage space (lines 12-13 of col. 5), Hathaway discloses the limitation "said least one speaker is disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck".

Although Hathaway fails to disclose that the sedan includes a spare tire compartment; however, Examiner takes Official Notice that a sedan having a spare tire compartment is a well known fact to the general public. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made that Hathaway's vehicle would have had a spare tire compartment, so a spare tire could be stored for emergency purpose.

Furthermore, it is well known to one of ordinary skill in the art that a spare tire could not be stored at an out-of-the-way corner of the trunk due to its circular shape. So the "out-of-the-way corner of the trunk" in Hathaway would not able to store a spare tire. Therefore, one skilled in the art could reasonably expected that the speaker in Hathaway stored at an "out-of-the-way corner of the trunk" is stored outside of a spare tire compartment.

Furthermore, Hathaway broadly teaches that one has to consider the storage space in the trunk when determining the speaker placement, so the speaker would not significantly reduce the useful trunk volume (col. 5, lines 12-13). Hathaway implies that the location of the low frequency speaker is a matter of trunk space management. Accordingly, one of ordinary skill in the art at the time of the invention was made would have been motivated, with the reference before him/her, to try and test different speaker mounting locations within the trunk, including an "out-of-way-corner of the trunk" outside of a spare tire compartment in order to find a best location for placing the low frequency speaker to generate the sound effect without significantly reducing the storage capacity.

Regarding claim 4, as shown in Fig. 5, the speaker in Hathaway is mounted in an enclosure.

Regarding claims 6 and 9, as shown in Fig. 5 of Hathaway, the deck is free of speaker holes. Furthermore, a hole (next to 3) for mounting a pipe (2), not for mounting the speaker, so Hathaway also shows that the rear deck is free of a speaker hole.

Regarding claims 5 and 10, the claimed "undesired hole between 60-80 Hz" in the front seat frequency response of the speaker and "undesired peak in the rear seat frequency response of said vehicle between 80-100 Hz" are the frequency responses by mounting speakers to the rear deck. See lines 19-25 of p. 3 of applicant's disclosure. It is also noted that the term "undesired" is a relative term. So it is subject to an individual to determine how deep the hole is to be considered as an undesired hole, and it is also subject to an individual to determine as how high the peak is to be considered as an undesired peak. Therefore, the response produced by Hathaway's speaker would meet the claimed frequency response because (1) Hathaway's speaker is not mounted on the deck; and (2) an individual could subjectively consider the response produced by Hathaway's speaker as free of an undesired peak in the rear seat between 80-100 Hz and free of an undesired

hole between 60-80 Hz in the front seat response. Furthermore, Hathaway shows the actual frequency response in the passenger compartment in Fig. 6 without "undesired peak" between 80-100 Hz and "undesired hole" between 60-80 Hz (the terms "undesired peak" and "undesired peak" are subjective term depending on the classification of an individual). Although Hathaway fails to provide separate responses at the front seat and back seat, one skilled in the art would have expected that the front seat response or the back seat would not deviate significantly from the response as shown in Fig. 6. Since Hathaway's speaker is not directly mounted to the deck, one skilled in the art would have expected that Hathaway's speaker would produce the frequency response meet the claimed limitation "free of an undesired peak in the rear seat frequency response of said vehicle between 80-100 Hz and free of an undesired hole between 60-80 Hz in the front seat frequency response of said vehicle" depending on the designer's subjective thresholds on how deep the hole is to be considered as an undesired hole, and high the peak is to be considered as an undesired peak. Col. 5, lines 6-12.

"A reference is only good for what it clearly and definitely discloses." *In re Hughes*, 145 U.S.P.Q. 467, 471 (C.C.P.A. 1965); *In re Moreton*, 129 U.S.P.Q. 227, 230 (C.C.P.A. 1961).

The Hathaway patent discloses:

The resonator can then be coupled to the passenger compartment through a flexible duct which forms radiating mass element 2 of the resonator, as shown in FIG. 5. This allows convenient placement of the system in an out-of-the-way corner of the trunk, without significant reduction of storage space. Col. 5, lines 6-12.

FIG 5 does not disclose the at least one speaker disposed at the rear of the rearward section of the trunk; it clearly shows the loudspeaker at the front of the trunk. Nor does this patent disclose occupying negligible trunk volume. Electrodynamic driver 4 is nearly half the height of the trunk, acoustic chamber 1 is more than half the height of the trunk, radiating element 2 is nearly half the height of the trunk and is shown with its opening in the rear deck to transfer acoustic energy into the passenger compartment 8 from electrodynamic driver 4 through acoustic compliance chamber 1 and acoustic port 2.

What the Examiner is doing is using the claims being rejected as a template or blueprint for attempting to read the claims on what is disclosed in the reference. That is not permitted.



The alleged teaching is found, not in the reference but in the claims being rejected. It is error to reconstruct the claimed invention from the prior art by using the rejected claim as a "blueprint." *Interconnect Planning Corp. v. Feil*, 227 U.S.P.Q. 543, 548 (Fed. Cir. 1985).

Here, the Examiner relied upon hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.<sup>15</sup> This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."<sup>16</sup> *In re Fritch*, 23 U.S.P.Q. 2d 1780, 1784 (Fed. Cir. 1992).

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<sup>15</sup> *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991).  
See also *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985).

<sup>16</sup> *In re Fine*, 837 F.2d at 1075, 5 USPQ2d at 1600.

IV. THE HUTCHINS PRIMARY REFERENCE DISCLOSING SPEAKERS DEPENDING FROM THE REAR DECK AND VIRVA SECONDARY REFERENCE DISCLOSING A BIG WOOFER DO NOT MAKE OBVIOUS THE SUBJECT MATTER AS A WHOLE OF THE CLAIMED INVENTION.

The office action states:

10. Claim 1, 4-6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutchins (US 4,572,326) in view Virva (US 4,164,988). Regarding claim 1, Hutchins discloses an audio speaker system for a vehicle having a passenger compartment (col. 2, line 26), a trunk(16) having a trunk floor (although not shown, it is inherently included), a dividing portion (col. 2, lines 24-26) and a rear deck (18), said dividing portion and said rear deck dividing the trunk and the passenger compartment, said audio speaker system comprising at least one low frequency speaker (42a or 42b) disposed within the trunk of the vehicle at the trunk rear (see Fig. 1) in a location spaced from the passenger compartment by the portion of the trunk extending to the front of the vehicle (see Fig. 1) such that said at least one speaker (4) is above the trunk floor and outside of the spare tire compartment.

Hutchins fails to show that the speaker is disposed in rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted

in said rear deck. In the same field of endeavor, Virva teaches how to place a low frequency speaker (col. 3, line 17) with enhanced bass response in the trunk, so not to interfere with the storage handling capacity of the trunk (col. 6, lines 6-10). Based on applicant's disclosure specified from line 32 of p. 2 to line 10 of p. 3 in view of Figs. 5-7, when car manufacturers calculate the trunk's volume, the useful trunk volume does not include the volume occupied by the speakers mounted to the rear deck and the volume surround the speakers (see Fig. 7). So one skilled in the art would have expected that Hutchins' deck-mounted speakers occupy significant amount of useful trunk volume due to the height and diameter of the speakers enclosed in the enclosures as shown in Fig. 1. On the other hand, Virva suggests placing the speaker at a location inside the trunk not on the deck, so the user can still maintain the storage volume. So Virva's speaker occupies negligible useful trunk volume for storage. Therefore, Virva's suggested speaker location meets the claimed limitation "at least one speaker is disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck". Thus, one of ordinary skill in the art at the time of the invention was made, with both references before him/her, would have been motivated to placing a low frequency speaker in a rearward section of the trunk instead of mounting it to the rear deck in order to enhance the low frequency response and maintain the storage capacity.

Regarding claims 3 and 8, Hutchins and Virva fail to show that the at least one speaker is disposed in a rear trunk corner at the rear of the vehicle. Virva broadly teaches that the designer has to consider the amount of the useful trunk volume left when placing the speaker and the flexible tube in the trunk (col. 6, lines 7-10). So, considering the amount of the space occupied by the speaker if it is being placing in the middle of the trunk, placing the speaker at the corner would seem to be one of several reasonable choices. Furthermore, one generally would not be able to store a big parcel or luggage at the corner of the trunk any way, so using the corner of the trunk for mounting speaker would not interfere with the normal trunk storage capacity.

Virva also teaches to make the speaker tube flexible to fit into any space in the trunk (col. 5, line 66+). Therefore, Virva does not limit the location of the speaker to be in the front or in the rear of the trunk at the rear of the vehicle. Accordingly, one of ordinary skill in the art at the time of the invention was made would have been motivated, with both references before him/her, to try and test different speaker mounting locations within the trunk, including the corner at the rear of the vehicle in order to find a best location for placing the enhanced bass response speaker without interfering the storage capacity.

Furthermore, it has been held to be within the general skill of a worker in the art to rearrange the location of a part as a matter of design choice. In *re Japikse*, 86 U.S.P.Q. 70.

Regarding claim 4, as shown in Fig. 5, the speaker in Virva is mounted in an enclosure.

Regarding claims 6 and 9, by modifying Hutchins in view of Virva, the rear deck is free of speaker holes.

Regarding claims 5 and 10, the claimed "undesired hole between 60-80 Hz" in the front seat frequency response of the speaker and "undesired peak in the rear seat frequency response of said vehicle between 80-100 Hz" are the frequency responses by mounting speakers to the rear deck. See lines 19-25 of p. 3 of applicant's disclosure. It is also noted that the term "undesired" is a relative term. So it is subject to an individual to determine how deep the hole is to be considered as an undesired hole, and it is also subject to an individual to determine as how high the peak is to be considered as an undesired peak. Therefore, Virva's speaker would produce the claimed frequency response because (1) Virva's speaker is not mounted on the deck; and (2) an individual could subjectively consider the response produced by Virva's speaker as free of an undesired peak in the rear seat between 80-100 Hz and free of an undesired hole between 60-80 Hz in the front seat response. Pp. 9-12.

In *KSR Int'l Co. v. Teleflex Inc.*, 82 U.S.P.Q. 2d 1385, 1396 (U.S. 2007), after stating the steps "in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent in issue", the Court said, "To facilitate review this analysis should be made explicit." See *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) ("[R]ejections on obvious grounds cannot be sustained by mere conclusory statements, instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness").

A fact finder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. See *Graham*, 383 U.S., at 36 (warning against a "temptation to read into the prior art the teachings of the invention in issue" and instructing courts to "guard against slipping into the use of hindsight" (quoting *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F. 2d 406, 412 [141 USPQ 549] (CA6 1964))). *Id.* 1397

In *Ex parte Aylward*, (BPA&I, Appeal No. 2007-2368 December 4, 2007) the Board said in reversing a final rejection,

“Both anticipation under §102 and obviousness under §103 are two-step inquiries. The first step in both analyses is a proper construction of the claims . . . . The second step in the analysis requires a comparison of the properly constructed claims to the prior art”. *Medichem, S.A. v. Rolabo, SL.*, 353 F. 3d 928, 933 (Fed. Cir. 2003) (internal citations omitted):

#### A. CLAIM CONSTRUCTION

“The Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art.” *In re Lowry* 32 F. 3d 1579, 1582 (Fed. Cir. 1994) (citing *In re Gulack*, 703 F. 2d 1381, 1385 (Fed. Cir. 1983). Slip Op. Pp. 7-8.

\* \* \*

“In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness.” *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993) (citing *in re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992)). “A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.” *In re Bell*, 991 F.2d 781, 783 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F. 2d 1048, 1051 (CCPA 1976)).

In *Ex parte Hamilton* (BPA&I Appeal No. 2007-3091, March 11, 2008) in reversing a final rejection the Board said:

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See *In re Kahn*, 441 F.3d 977, 987-88 (Fed. Cir. 2006), *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991), and *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

The Examiner can satisfy this burden by showing some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR Int'l. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Slip Op. Pp. 5-6.

The primary reference discloses a conventional automobile loudspeaker system that is “A loudspeaker installation for the rear shelf of a motor vehicle.”, abstract, exactly away from what is disclosed and claimed in this application. The secondary reference discloses, “A loudspeaker system . . . having a rigid framework which contains a high compliance loudspeaker connected

to an adjustable air column tube." Abstract. Nothing in that reference remotely could be combined with anything in the primary reference to meet any claim in this application.

"Moreover, we observe that even if these references were combined in the manner proposed by the examiner, that which is set forth in appellant's claims . . . would not result." *Ex parte Bogar*, slip op. p.7 (BPA&I Appeal No. 87-2462, October 27, 1989). "Even if we were to agree with the examiner that it would have been obvious to combine the reference teachings in the manner proposed, the resulting package still would not comprise zipper closure material that terminates short of the end of the one edge of the product containing area, as now claimed." *Ex parte Schwarz*, slip op. p.5 (BPA&I Appeal No. 92-2629 October 28, 1992). "Although we find nothing before us indicating why it would be desired to combine the references in the manner urged by the examiner, it is clear to us that such a modification by itself would not result in that which is set forth in the claims." *Ex Parte Kusko*, 215 U.S.P.Q. 972, 974 (BPA&I 1981).

And the proposed combination would destroy the primary reference apparatus for its intended purpose.

In *Ex parte Sternau*, 155 U.S.P.Q. 733, 735 (Bd. of Appeals 1967) the Board said:

"However, there is nothing in the disclosures of [primary reference] Young and [secondary reference] Haslacher that would teach the Examiner's proposed combination or any reason for making it. In fact, the proposed combination would destroy the Young apparatus for its intended purpose. Thus, we will reverse the rejection of claims 44 and 45 for this reason."

The reliance on *In re Japikse*, 85 U.S.P.Q. 70 (C.C.P.A. 1950) is inapposite. The only reference to changing a part location in that case involved rejection of a claim to a combination in a hydraulic power press that read on a reference except for the last limitation "means disposed in alignment with said opening for contact with said depending means to start the pressing operation of said hydraulic press." The court said, "As to that limitation it was held there would be no invention in shifting the starting switch disclosed by Cannon [the reference] to a different position since the operation of the device would not thereby be modified. *Id.* 73.

V. THAT THE PTO SENT AN E-MAIL TO COMPETITORS OF THE APPLICATION OWNER SEEKING PRIOR ART IN AN EFFORT TO BAR THE GRANT OF A PATENT TO APPLICATION OWNER AND WAS UNABLE TO OBTAIN A SINGLE RELEVANT REFERENCE IS FURTHER EVIDENCE THAT THE CLAIMS MEET THE CONDITIONS FOR PATENTABILITY.

M.P.E.P. 1214.04 headed "**EXAMINER REVERSED**" provides:

The Examiner should never regard such a reversal as a challenge to make a new search to uncover other and better references. This is particularly so where the application or ex parte reexamination proceeding has meanwhile been transferred or assigned to an examiner other than the one who rejected the claims leading to the appeal. The second examiner should give full faith and credit to the prior examiner's search.

Despite the reversals by the Board on March 18, 2002, the PTO not only made a new search, but sent an e-mail to competitors of the application owner and its attorneys that read as follows:

Dear Sir/Madam

My name is Pamela Reynolds. I work for the United States Patent and Trademark Office, in Arlington Virginia, as the Patent Information Specialist in the Electronic Information Center.

One of our patent examiners would **like to obtain the following documentation**

**Articles with pictures and dated description of mounting a woofer or subwoofer in the trunk of a car or automobile. This data must be dated before 1992.** [when the parent application was filed]

The examiner believes this information will help in determining whether or not to grant a patent application. This application is not related to any patents that you or your Company may or may not have pending, that we know of. [untrue, this email was sent to Bose]

Before issuing a patent, an examiner looks for any information indicating that the application does not duplicate an existing invention or product. The examiner believes your information or document might fit this profile. The Examiner needs this information as soon as possible, so a prompt reply would be appreciated.

Thank you.  
Pamela Reynolds  
United States Patent and Trademark Office  
Arlington, VA

Applicant : Donald F. Hamilton et al.  
Serial No. : 08/777,958  
Filed : December 24, 1996  
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Attorney's Docket No.: 02103-0211002 / AABOSQ42

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If you prefer, you may fax the information to the Electronic Information Center at (703) 305-5443 or email it to me [pamela.reynolds@uspto.gov](mailto:pamela.reynolds@uspto.gov)

Despite our repeated requests for responses to this e-mail, the Office has failed to furnish a single response, indicating that there is no more pertinent art that has been considered since the parent of this application was filed more than 16 years ago. That is further evidence that the invention disclosed and claimed in this application meets the conditions for patentability.

#### CONCLUSION

In view of the authorities and reasoning of record and the inability of the prior art alone or in combination, to anticipate, suggest or make obvious the subject matter as a whole of the invention disclosed and claimed in this application, the decision of the Examiner again rejecting claims 1, 3-6 and 8-10 should again be reversed.

Applicant : Donald F. Hamilton et al.  
Serial No. : 08/777,958  
Filed : December 24, 1996  
Page : 15 of 19

Attorney's Docket No.: 02103-0211002 / AABOSQ42

The brief fee was previously enclosed. Should any fee have been omitted or be inadequate or excessive, the office is respectfully requested to charge any deficiency or credit any overpayment to Deposit Account No. 06-1050, order number 02103-211002.

Respectfully submitted,  
FISH & RICHARDSON P.C.

9 April 2009  
Date: \_\_\_\_\_

/charles hieken/

\_\_\_\_\_  
Charles Hieken  
Reg. No. 18,411

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Boston, MA 02110  
Telephone: (617) 542-5070  
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**(viii) Appendix of Claims**

1. An audio speaker system for a vehicle having a passenger compartment, a spare tire compartment, a trunk having a trunk floor, a dividing portion and a rear deck, said dividing portion and said rear deck dividing the trunk and the passenger compartment, said audio speaker system comprising at least one low frequency speaker disposed within the trunk of the vehicle at the trunk rear in a location spaced from the passenger compartment by the portion of the trunk extending to the front of said vehicle such that said at least one speaker is clear of the rear deck above said trunk floor and outside said spare tire compartment,  
  
wherein said at least one speaker is disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck.
3. An audio speaker system in accordance with claim 1 , wherein said at least one speaker is disposed in a rear trunk corner at the rear of said vehicle.
4. An audio speaker system in accordance with claim 1, wherein said at least one speaker is mounted in an enclosure.
5. An audio speaker system in accordance with claim 1, wherein said vehicle is characterized by a front seat frequency response and a rear seat frequency response constructed and arranged to be free of an undesirable peak in the rear seat frequency response of said vehicle between 80-100 Hz and free of an undesirable hole between 60-80 Hz in the front seat frequency response of said vehicle.
6. An audio speaker system for a vehicle in accordance with claim 1 wherein said rear deck is free of speaker holes.
8. An audio speaker system in accordance with claim 6, wherein said at least one speaker is disposed in a rear trunk corner at the rear of said vehicle.

9. An audio speaker system in accordance with claim 6, wherein said at least one speaker is mounted in an enclosure.

10. An audio speaker system in accordance with claim 6, wherein said vehicle is characterized by a front seat frequency response and a rear seat frequency response constructed and arranged to be free of an undesirable peak in the rear seat frequency response of said vehicle between 80-100 Hz and free of an undesirable hole between 60-80 Hz in the front seat frequency response of said vehicle.

Applicant : Donald F. Hamilton et al.  
Serial No. : 08/777,958  
Filed : December 24, 1996  
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Attorney's Docket No.: 02103-0211002 / AABOSQ42

**(ix) Evidence Appendix**

Please see attached email from the United States Patent and Trademark Office, dated June 15, 2004.

## Chuck Hieken

---

**From:** Chuck Hieken  
**Sent:** Tuesday, September 13, 2005 3:48 PM  
**To:** Brooke Benjamin  
**Subject:** PTO Email to Bose Competitors

**From:** Reynolds, Pamela [mailto:Pamela.Reynolds@USPTO.GOV]  
**Sent:** Tuesday, June 15, 2004 9:29 AM  
**To:** gklein@CE.org; jtunnell@CE.org; Aevelyn@bostona.com; Baron, Al; AUDIOBAHNX@aol.com; awenzel@jlaudio.com; barry@magnadyne.com; barryo@audioprods.com; bborchardt@recoton.com; beckerna@nis.net; bgaffane@pioneer-usa.com; bgoodman@aurasound.com; bill@pinnaclesys.com; cfontes@bostona.com; crandall@mcintoshlabs.com; cris.pyle@klipsch.com; cschultz@kicker.com; dean@nakamichi.com; dlovelace@customgroup.com; etoomey@aiwa.com; fpierce@clarion.com; gabrielle.wolohojian@haledorr.com; gbougdanos@audiovox.com; howardh@apic.ca; hsperling@harman.com; ildau@recoton.com; IMAGEDYNA@aol.com; jim.frazer@us.bosch.com; jim@directed.com; jminarik@directed.com; jmuto@clarion.com; joneill@alpine-usa.com; Jrichter@kenwoodusa.com; jrichter@kenwoodusa.com; jshalam@audiovox.com; jsmall@velodyne.com; loyd@mitekcorp.com; mack@kmlaw.com; malbert@wolfgreenfield.com; mfitzgerald@magnadyne.net; mitch\_nollman@bose.com; mkoehn@cerwin-vega.com; mm@dynaudiousa.com; mml@marymlee.com; pam@klhaudio.com; parvinch@rockfordcorp.com; rain@kefamerica.com; raveletteg@tce.com; rstone@pioneerservice.com; s\_baker@denonnj.com; samt@diamondaudio.com; Sandy1ma@aol.com; scaldero@yamaha.com; steve@profileusa.com; TMStamm@aol.com; tom.patton@philips.com; tom@blaupunktusa.com; townsf@panasonic.com; lkennedy@recoton.com; cwoodruff@alpine-usa.com; esummers@harman.com; kc@directed.com; kcbean@directed.com; bisset@hugheshubbard.com; twerly@Washburn.com; rmacdonald@nmbusa.com; dmiyamoto@sidley.com; legal@jlaudio.com; gerry.newman@sfnr.com; Sylvia@klhaudio.com; hmitnick@jvc.com  
**Subject:** Mounting a woofer or subwoofer in a car

Dear Sir/Madam

My name is Pamela Reynolds. I work for the United States Patent Trademark Office, in Arlington Virginia, as the Patent Information Specialist in the Electronic Information Center.

One of our patent examiners would like to obtain the following documentation

**Articles with pictures and dated description of mounting a woofer or subwoofer in the trunk of a car or automobile. This data must be dated before 1992.**

The examiner believes this information will help in determining whether or not to grant a patent application. This application is not related to any patents that you or your Company may or may not have pending, that we know of.

Before issuing a patent, an examiner looks for any information indicating that the application does not duplicate an existing invention or product. The examiner believes your information or document might fit this profile. The Examiner needs this information as soon as possible, so a prompt reply would be appreciated.

Thank you.  
Pamela Reynolds  
United States Patent and Trademark Office  
Arlington, VA  
703-306-0255  
(703) 305-5443 FAX

Please send the document or paper copy (email a pdf or fax a copy) or mail a hard  
copy to:

US Patent & Trademark Office  
Electronic Information Center  
ATTN: Pamela Reynolds  
2101 Crystal Plaza Arcade #311  
Arlington, VA 22202

If you prefer, you may fax the information to the Electronic Information Center at (703) 305-5443 or email it to me [pamela.reynolds@uspto.gov](mailto:pamela.reynolds@uspto.gov)

Applicant : Donald F. Hamilton et al.  
Serial No. : 08/777,958  
Filed : December 24, 1996  
Page : 19 of 19

Attorney's Docket No.: 02103-0211002 / AABOSQ42

**(x) Related Proceedings Appendix**

Please see the attached Board of Patent Appeals and Interferences decisions.

CPH  
Q42 02103/211001

Decision Code:	Decision on Appeal
Date:	11.27.96
Date:	12.27.96
Date:	1.26.97
Author:	B. H. T. S.
Record:	99363

Date:	12.27.96
Date:	12.27.96
Date:	12.27.96

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

This opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

**RECEIVED**

DEC 02 1996

**FISH & RICHARDSON**  
BOSTON, MA

Ex parte DONALD F. HAMILTON  
and MICHAEL D. ROSEN

Appeal No. 94-2403  
Application No. 07/871,926<sup>1</sup>

**RECEIVED**

DEC 02 1996

**FISH & RICHARDSON P.C.**  
BOSTON, MA

HEARD:  
October 16, 1996

Before KRASS, JERRY SMITH and BARRETT, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-4, which constitute all the claims in the application. An amendment after final rejection was filed on August 17, 1993 but was denied entry by the

<sup>1</sup> Application for patent filed April 21, 1992.

Appeal No. 94-2403  
Application No. 07/871,926

examiner. A second amendment after final rejection was filed on January 9, 1995 and was entered by the examiner.

The invention pertains to an audio speaker system for a vehicle such as a conventional automobile. More specifically, the audio speaker system has at least one low frequency speaker disposed in a rear portion within the trunk of the vehicle.

Representative claim 1 is reproduced as follows:

1. An audio speaker system for a vehicle having a passenger compartment, a trunk, a dividing portion and a rear deck, said dividing portion and said rear deck dividing the trunk and the passenger compartment, said audio speaker system comprising at least one low frequency speaker disposed within the trunk of the vehicle at the trunk rear such that said at least one speaker is clear of the rear deck.

The examiner relies on the following reference:

Newcomb, "Something Fishy," Car Audio and Electronics, Vol. 5, No. 2, February 1992, pages 28-32.

Claims 1-4 were finally rejected under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the invention. Claims 1-4 also stand rejected under 35 U.S.C. § 102(a) as anticipated by the teachings of the Newcomb article (Newcomb).

Rather than repeat the arguments of appellants or the examiner, we make reference to the brief and the answer for the respective details thereof.



Appeal No. 94-2403  
Application No. 07/871,926

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner, the arguments in support of the rejections and the evidence of anticipation relied upon by the examiner as support for the prior art rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellants' arguments set forth in the brief along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the claims particularly point out the invention in a manner which complies with 35 U.S.C. § 112. We are also of the view that the teachings of Newcomb fully meet the invention as recited in claims 1-4. Accordingly, we affirm.

Appellants have indicated that for purposes of this appeal the claims will all stand or fall together as a single group. Consistent with this indication appellants have made no separate arguments with respect to any of the claims on appeal. Accordingly, all the claims before us will stand or fall together. Note In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986); In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983). Accordingly, we need only consider the

Appeal No. 94-2403  
Application No. 07/871,926

rejections against claim 1 as representative of all the claims on appeal from the appellants' point of view.

We consider first the rejection of claims 1-4 under the second paragraph of 35 U.S.C. § 112. The examiner's rejection of these claims appears in the answer as follows:

Regarding claim 1, it is not clear where the trunk rear is. Examiner suggests to define the term relating to the front/rear of the car.

Regarding claim 2, see the rejection for claim 1.

Regarding claim 2, the term "negligible useful volume" is vague and indefinite.

Regarding claim 3, it is not clear where the rear trunk corner is.<sup>2</sup>

With respect to claim 1, appellants assert that "the reference to rear is with respect to the front and rear of the vehicle" [brief, page 2]. They also note that a proposed amendment to the claim to clarify this issue was denied entry by the examiner. With respect to claim 2, appellants assert that negligible useful trunk volume means that the speaker takes up a "small percentage of the useful trunk volume" [brief, page 3]. They also again note that an attempt to clarify the claim by

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<sup>2</sup> We note that the rejection of claim 3 under the second paragraph of 35 U.S.C. § 112 was apparently withdrawn in a letter from the examiner dated May 5, 1995 which was sent to appellants in response to the amendment filed on January 9, 1995.

Appeal No. 94-2403  
Application No. 07/871,926

amendment was denied entry by the examiner. The examiner responded in the answer as to why the proposed amendments to the claims were denied entry, but the examiner did not otherwise further address the merits of the rejection.

As a general rule, a claim must set out and circumscribe a particular area with a reasonable degree of precision and particularity when read in light of the disclosure as it would be by the artisan. In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed in light of the specification. Seattle Box Co. v. Industrial Crating & Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 574 (Fed. Cir. 1984).

The rejection of claim 1 seems to recognize that "trunk rear" either means the portion of the trunk closest to the front of the vehicle or the portion of the trunk closest to the rear of the vehicle. The rejection insists that the definition must appear within the claim. The specification of the application and the drawings make it reasonably clear that the rear of the trunk is used in the same sense as the rear of the vehicle. The artisan having read the specification would readily understand that the trunk rear refers to a portion of the trunk located near

Appeal No. 94-2403  
Application No. 07/871,926

the rear of the vehicle. In our view, when claim 1 is interpreted in light of the specification, there can be no doubt as to what is intended by the phrase "trunk rear." Therefore, we do not sustain the rejection of claim 1 as being vague and indefinite.

With respect to claim 2, the examiner provides no additional analysis in support of the position that the term "negligible useful volume" is "vague and indefinite." The examiner has not given any reason why the objected to phrase is considered to be vague and indefinite. The specification describes what is meant by useful trunk volume, and the artisan should understand what is included within the recitation of occupying a negligible amount of this useful trunk space. We will not sustain the rejection of claim 2 as being vague and indefinite.

In summary, we have not sustained any of the rejections of claims 1-4 with respect to 35 U.S.C. § 112, second paragraph, so that the rejection of the claims under section 112 is reversed.

We now consider the rejection of claims 1-4 under 35 U.S.C. § 102(a) as anticipated by Newcomb. With respect to claim 1, the examiner notes that Newcomb assembles a woofer in the trunk rear of a car together with a fish tank [answer, page 3]. More particularly, the examiner asserts that in addition to four

Appeal No. 94-2403  
Application No. 07/871,926

speakers mounted on the floor of the trunk, there is an additional fifth woofer shown in the corner of Newcomb's trunk. Appellants argue that there is no mention of such a fifth woofer in the Newcomb article [brief, pages 5-6]. The examiner also asserts that the four subwoofers which are located over the spare tire are "within the trunk" [answer, page 5]. Appellants respond that the spare tire compartment in the floor containing the four subwoofers in Newcomb is not the trunk [brief, page 7].

In considering the respective arguments noted above, we note that the propriety of the rejection of claim 1 under 35 U.S.C. § 102 revolves around two basic questions. First, we must determine if the speakers located in the covering of the spare tire compartment can be considered to be within the trunk. Second, we must determine if the noted fifth speaker in Newcomb is, in fact, a speaker. If our determination on either question results in a yes answer, then the invention of claim 1, as broadly recited, would be fully met by the teachings of Newcomb.

With respect to the first question noted above, we find ourselves in agreement with the examiner. That is, in our view, the four subwoofers in Newcomb can be considered to be within the trunk as that term is usually understood. Newcomb specifically states on page 29, last column that "bass from four 10-inch

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Application No. 07/871,926

subwoofers in the trunk could enter the interior of the car through the fish tank" [emphasis added]. Newcomb also states on page 30, second column that "four a/d/s S10 10-inch subwoofers in the floor of the trunk can be covered" [emphasis again added]. Thus, it is clear that Newcomb considers the four subwoofers to be located within the trunk as the trunk area is generally understood. Thus, we do not agree with appellants' contention that these four subwoofers are in the spare tire compartment and, therefore, not in the trunk. The recitation of the at least one low frequency speaker recited in claim 1 is met by the subwoofers shown and described in Newcomb.

Our decision that the subwoofers of Newcomb meet the invention as broadly recited in claim 1 means that the rejection of claim 1 as anticipated by Newcomb is sustained. Since appellants indicated that claims 1-4 stand or fall together as noted supra, we sustain the rejection of claims 1-4 under 35 U.S.C. § 102.

Although it is now a moot point with respect to the ultimate decision in this appeal, we note for the record that our view of the second question posed above is that the examiner has failed to establish that there is a "fifth" speaker shown in the trunk of the vehicle described by Newcomb. There is no additional

Appeal No. 94-2403  
Application No. 07/871,926

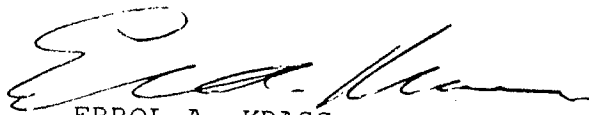
speaker mentioned as noted by appellants, and the drawings in the article are insufficient to conclusively show that the item pointed to by the examiner is in fact a speaker. We note that Newcomb states that two Phoenix Gold MS-2240 amplifiers are mounted on opposite trunk walls of the vehicle, and it may be one of these amplifiers that the examiner is pointing to. In any case, we would not decide a question of anticipation based upon conjecture and speculation as to what is disclosed within a reference. At any rate, the determination of this "fifth speaker" question is not material to the ultimate decision we have reached in this appeal.

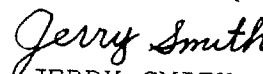
In conclusion, the rejection of the claims under 35 U.S.C. § 112 was not sustained whereas the rejection of the claims under 35 U.S.C. § 102 was sustained. Therefore, the decision of the examiner rejecting claims 1-4 is affirmed.


Appeal No. 94-2403  
Application No. 07/871,926

No time period for taking any subsequent action in  
connection with this appeal may be extended under 37 CFR  
§ 1.136(a).

AFFIRMED

  
ERROL A. KRASS  
Administrative Patent Judge)

  
JERRY SMITH  
Administrative Patent Judge)

  
LEE E. BARRETT  
Administrative Patent Judge)

) BOARD OF PATENT  
) APPEALS AND  
) INTERFERENCES



Appeal No. 94-2403  
Application No. 07/871,926

Charles Hieken  
Fish & Richardson  
225 Franklin Street  
Boston, MA 02110-2804

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte DONALD F. HAMILTON and MICHAEL D. ROSEN

Appeal No. 2000-1577  
Application 08/777,958

HEARD: March 5, 2002

**MAILED**

**MAR 18 2002**

**PAT. & T.M. OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Before FLEMING, LALL, and SAADAT, Administrative Patent Judges.

FLEMING, Administrative Patent Judge.

**DECISION ON APPEAL**

This is a decision on appeal from the final rejection of claims 1 through 10, all the claims pending in present application.

Appeal No. 2000-1577  
Application 08/777,958

The invention relates to the placement of a low frequency audio speaker to effect improved frequency response in the interior of the vehicle with a trunk speaker that occupies negligible useful trunk volume. Figure 1 in the specification is a rear three-quarter view of an automobile showing speaker placement according to an exemplary embodiment of the invention. See page 1 of the specification. Figure 2 is a rear view of the automobile showing speaker placement in accordance with the embodiment of figure 1. See page 1 of the specification. Figure 1 shows a speaker enclosure 9 placed in a rearward section of the trunk 7 of the vehicle 1 above the trunk floor 8 outside any compartment containing the spare tire. See page 2 of the specification. The speaker enclosure 9 is not mounted to the rear deck 3 nor are speaker holes provided in the rear deck. See page 2 of the specification. As shown in the rear view of figure 2, placement of the speaker enclosure 9 is preferably in a corner of the vehicle trunk 7 occupying negligible useful trunk volume. See page 2 of the specification.

The only independent claim 1 is reproduced as follow:

1. An audio speaker system for a vehicle having a passenger compartment, a spare tire compartment, a trunk having a trunk floor, a dividing portion and a rear deck, said dividing portion and said rear deck dividing the trunk and the passenger compartment, said audio speaker system comprising at least one

Appeal No. 2000-1577  
Application 08/777,958

low frequency speaker disposed within the trunk of the vehicle at the trunk rear in a location spaced from the passenger compartment by the portion of the trunk extending to the front of the said vehicle such that said at least one speaker is clear of the rear deck above said trunk floor and outside said spare tire compartment.

The Examiner relies on the following reference:

Newcomb, D. "Something Fishy" Car Audio and Electronics, (Feb. 1992) pp. 28-32.

Claims 1 through 10 stand rejected under 35 U.S.C. § 103 as being unpatentable over Newcomb.

Rather than reiterate the arguments of Appellants and the Examiner, references is made to the briefs<sup>1</sup> and Answer for the respective details thereof.

#### OPINION

We will not sustain the rejection of claims 1 through 10 under 35 U.S.C. § 103.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a *prima facie* case of obviousness. In *re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ 1443, 1444 (Fed. Cir. 1992). See also In *re Piasecki*, 745 F.2d 1468,

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<sup>1</sup>Appellants filed an appeal brief on January 19, 1999. Appellants filed a reply brief on September 29, 1999. The Examiner mailed an office communication on December 15, 1999, stating that the reply brief has been noted and entered.

Appeal No. 2000-1577  
Application 08/777,958

1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. In *re Fine*, 837, F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. *Oetiker*, 977, F.2d at 1445, 24 USPQ at 1444. See also *Piasecki*, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and arguments." In *re Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." In *re Lee*, Slip OP 00-1158 page 9. With these principles in mind, we commence review of the pertinent evidence and arguments of Appellants and Examiner.

Appeal No. 2000-1577  
Application 08/777,958

Appellants argue that Newcomb does not teach or suggest "at least one low frequency speaker disposed within the trunk of the vehicle at the trunk rear in a location spaced from the passenger compartment by the portion of the trunk extending to the front of said vehicle such that said at least one speaker is clear of the rear deck above said trunk floor and outside said spare tire compartment" as recited in Appellant's claim 1. See page 4 of the Appellant's brief. Appellants further argue that the Examiner is using the Appellant's disclosure as a blueprint or a template for proposing the modification to what the reference discloses in an attempt to meet the terms of claims being rejected. See page 5 of the Appellants' brief. Appellants further argue that the Examiner must provide evidence of any factual teachings or suggestions that would lead one of ordinary skill in the art to make the proposed modification. See pages 3, 4 and 5 of Appellant's reply brief.

The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In *re Fritch*, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), citing *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125,

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Application 08/777,958

1127 (Fed. Cir. 1984). It is further established that "[s]uch a suggestion may come from the nature of the problem to be solved, leading inventors to look to references relating to possible solutions to that problem." *Pro-Mold & Tool Co. v. Great Lakes Plastics Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), citing *In re Rinehart*, 531 F.2d 1048, 1054, 189 USPQ 143, 149 (CCPA 1976) (considering the problem to be solved in a determination of obviousness). The Federal Circuit reasons in *Para-Ordnance Mfg. Inc. v. SGS Importers Int'l Inc.*, 73 F.3d 1085, 1088-89, 37 USPQ2d 1237, 1239-40 (Fed. Cir. 1995), that for the determination of obviousness, the court must answer whether one of ordinary skill in the art who sets out to solve the problem and who had before him in his workshop the prior art, would have been reasonably expected to use the solution that is claimed by the Appellants.

In addition, our reviewing court requires the PTO to make specific findings on a suggestion to combine prior art references. In *re Dembiczak*, 175 F.3d 994, 1000-01, 50 USPQ2d 1614, 1617-19 (Fed. Cir. 1999). Our reviewing court states further that the "factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority." In *re Lee*, Slip OP 00-1158 page 9. It is

Appeal No. 2000-1577  
Application 08/777,958

improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983).

Upon our review of Newcomb, we find that Newcomb teaches to place the woofer inside the spare tire compartment. Furthermore, we fail to find any suggestion of placing the woofer in any other portion of the trunk. Furthermore, we find that Newcomb specifically teaches that the placement of the woofer in the spare tire compartment of the trunk is advantageous because it allows for more usable space in the trunk for other luggage. See page 30 of Newcomb. Therefore, we fail to find that the record supports the Examiner's position of specific findings on a suggestion to modify Newcomb to place the woofer outside of the spare tire compartment as claimed by the Appellants.



Appeal No. 2000-1577  
Application 08/777,958

We have not sustained the rejection of claims 1 through 10 under 35 U.S.C. § 103.

Accordingly, the Examiner's decision is reversed.

REVERSED

*Michael R. Fleming*  
MICHAEL R. FLEMING  
Administrative Patent Judge

*Parshotam S Lall*  
PARSHOTAM S. LALL  
Administrative Patent Judge

*MAHSHID SAADAT*  
MAHSHID SAADAT  
Administrative Patent Judge

BOARD OF PATENT  
APPEALS AND  
INTERFERENCES

MRF: pgg

Appeal No. 2000-1577  
Application 08/777,958

Charles Hieken  
Fish & Richardson  
225 Franklin Street  
Boston, MA 02110-2804

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* DONALD F. HAMILTON and MICHAEL D. ROSEN

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Appeal 2007- 3091  
Application 08/777,958  
Technology Center 2600

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Decided: March 11, 2008

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Before ANITA PELLMAN GROSS, MAHSHID D. SAADAT,  
and JOHN A. JEFFERY, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 3-6, and 8-10, which are all of the claims pending in this application as claims 2 and 7 have been canceled. We have jurisdiction under 35 U.S.C. § 6(b).<sup>1</sup>

Appellants' invention relates to the placement of a low frequency audio speaker to affect improved frequency response in the interior of a

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<sup>1</sup> An oral hearing for this application was held on February 14, 2008.

vehicle with a trunk speaker that occupies negligible useful trunk volume (Spec. 1).

Independent Claim 1 is representative and reads as follows:

1. An audio speaker system for a vehicle having a passenger compartment, a spare tire compartment, a trunk having a trunk floor, a dividing portion and a rear deck, said dividing portion and said rear deck dividing the trunk and the passenger compartment, said audio speaker system comprising at least one low frequency speaker disposed within the trunk of the vehicle at the trunk rear in a location spaced from the passenger compartment by the portion of the trunk extending to the front of said vehicle such that said at least one speaker is clear of the rear deck above said trunk floor and outside said spare tire compartment,

wherein said at least one speaker is disposed in a rearward section of the trunk occupying negligible useful trunk volume to cause a smaller decrease in calculated trunk volume than would occur with said at least one speaker mounted in said rear deck.

The Examiner relies on the following prior art in rejecting the claims:

Amy Ziffer, *Family Affair*, May 1991, Car Audio and Electronics, pp. 38-42, herein referred to as "Ziffer (May)."

Amy Ziffer, *Pursuit of Perfection*, March 1991, Car Audio and Electronics, pp. 46-50, herein referred to as "Ziffer (March)."

*BAZOOKA Bass Tubes* advertisement, January 1990, Car Audio and Electronics, p. 41, herein referred to as "Bazooka."

Claims 1, 3-6, and 8-10 stand rejected under the first paragraph of 35 U.S.C. § 112 for lack of an enabling disclosure related to the position of the speaker in the rearward section of the trunk occupying negligible useful trunk volume.

Claims 1, 3-6, and 8-10 stand rejected under the second paragraph of 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Appellants regard as their invention.

Claims 1, 3, and 4 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Ziffer (May).

Claims 1, 3, and 4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ziffer (May) and Bazooka.

Claims 1, 3-6, and 8-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ziffer (March) and Bazooka.

Rather than repeat the arguments here, we make reference to the Briefs and the Answer for the respective positions of the Appellants and the Examiner.

We reverse.

### ISSUES

1. Under the first paragraph of 35 U.S.C. § 112, with respect to appealed claims 1, 3-6, and 8-10, would the skilled artisan have recognized Appellants' disclosure as an enabling disclosure?

2. Under the second paragraph of 35 U.S.C. § 112, with respect to appealed claims 1, 3-6, and 8-10, would the claims reasonably apprise those of ordinary skill in the art of their scope?

3. Under 35 U.S.C. § 102(a), with respect to appealed claims 1, 3, and 4, does Ziffer (May) anticipate the claimed subject matter by teaching all of the claimed limitations?

4. Under 35 U.S.C § 103(a), with respect to appealed claims 1, 3, and 4, would one of ordinary skill in the art at the time of the invention have found it obvious to combine Ziffer (May) with Bazooka to render the claimed invention unpatentable?

5. Under 35 U.S.C § 103(a), with respect to appealed claims 1, 3-6, and 8-10, would one of ordinary skill in the art at the time of the invention have found it obvious to combine Ziffer (March) with Bazooka to render the claimed invention unpatentable?

## PRINCIPLES OF LAW

### *Enablement*

To be enabling, the specification must teach those of ordinary skill in the art “how to make and how to use the invention as broadly as it is claimed.” *In re Vaeck*, 947 F.2d 488, 496 (Fed. Cir. 1991). Furthermore, the specification, when filed, must enable one skilled in the particular art to use the invention without undue experimentation. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988). *See also Spectra Physics v. Coherent*, 827 F.2d 1524, 1533 (Fed. Cir. 1987).

### *Indefiniteness*

Analysis of 35 U.S.C. § 112, second paragraph, should begin with the determination of whether claims set out and circumscribe the particular area with a reasonable degree of precision and particularity; it is here where definiteness of the language must be analyzed, not in a vacuum, but always in light of teachings of the disclosure as it would be interpreted by one

possessing ordinary skill in the art. *In re Johnson*, 558 F.2d 1008, 1015 (CCPA 1977), citing *In re Moore*, 439 F.2d 1232, 1235 (1971). “The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope.” *In re Warmerdam*, 33 F.3d 1354, 1361 (Fed. Cir. 1994) (citing *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 927 F.2d 1200, 1217 (Fed. Cir.), *Genetics Inst., Inc. v. Amgen, Inc.*, 112 S. Ct. 169 (1991)). Furthermore, our reviewing court points out that a claim which is of such breadth that it reads on subject matter disclosed in the prior art is rejected under 35 U.S.C. § 102 rather than under 35 U.S.C. § 112, second paragraph. See *In re Hyatt*, 708 F.2d 712, 715 (Fed. Cir. 1983).

#### *Anticipation*

A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference. See *In re Paulsen*, 30 F.3d 1475, 1478-79 (Fed. Cir. 1994). Anticipation of a claim requires a finding that the claim at issue reads on a prior art reference. *Atlas Powder Co. v. IRECO Inc.*, 190 F.3d 1342, 1346 (Fed. Cir. 1999) (quoting *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 781 (Fed. Cir. 1985)).

#### *Obviousness*

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See *In re Kahn*, 441 F.3d 977, 987-88 (Fed. Cir. 2006), *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991), and *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

The Examiner can satisfy this burden by showing some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *KSR Int'l. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

### ANALYSIS

*I. 35 U.S.C. § 112, first paragraph, rejection*

The Examiner's position is focused on the presence of information in Appellants' disclosure related to how a low frequency speaker of the size and shape necessary to be employed in the claims may be produced (Ans. 5). The Examiner relies on one of the applied prior art references, Ziffer (March), which identifies Bazooka speakers as the most compact speakers available at the time of invention (*id.*). The Examiner takes the position that since Appellants acknowledge the existence of Bazooka speakers and the large space they occupy when placed in the trunk of a car, such an acknowledgment supports the fact that Appellants' disclosure is non-enabling (Ans. 16).

We agree with Appellants that the above mentioned recognition of the large size of Bazooka speakers does not support the lack of an enabling disclosure (App. Br. 5; Reply Br. 3). Furthermore, as pointed out by Appellants (*id.*), we find that Figure 2 of the instant Specification discloses the placement of the speaker enclosure 9 in the corner of the vehicle trunk occupying negligible useful trunk volume (Spec. 2:17-20) while the trunk as a whole acts as a natural low-pass filter (Spec. 2:25-27). Therefore, in view of the above discussion and considering the presented facts and the



arguments made by Appellants and the Examiner, we find that Appellants' disclosure is enabling, and the rejection of claims 1, 3-6, and 8-10 under the first paragraph of 35 U.S.C. § 112 cannot be sustained.

2. *35 U.S.C. § 112, second paragraph, rejection*

The Examiner takes the position that since the amount of useful trunk volume occupied by the speaker varies based on the type of the vehicle, the claim recitation of "negligible useful trunk volume" renders the claims indefinite (Ans. 6-7, 18). Appellants contend that the Specification fully explains the disputed limitation and refer to the prior Board decision in the parent application which did not sustain a similar rejection made by the Examiner (App. Br. 7-8; Reply Br. 5).

Similar to our discussion *supra* with regard to the lack of enablement, we find that Page 2 of Appellants' Specification defines what useful trunk volume is and how, by their placement in a corner of the trunk, the speakers occupy a negligible trunk space. Furthermore, the ordinary meaning of the term "negligible," as understood by one of ordinary skill in the art and as defined in a dictionary as "so small or unimportant or of so little consequence as to warrant little or no attention,"<sup>2</sup> is consistent with Appellants' disclosure. As such, the claimed term "negligible useful trunk volume" reasonably apprises those of skill in the art of its scope, and the rejection of claims 1, 3-6, and 8-10 as being indefinite under the second paragraph of 35 U.S.C. § 112 is not sustained.

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<sup>2</sup> Merriam-Webster's Online Dictionary, at <http://www.merriam-webster.com> (last visited Feb. 19, 2008).

3. *35 U.S.C. § 102(a) rejection*

Appellants contend that Ziffer (May) shows in the accompanying pictures a pair of speakers placed in the side of a trunk in such a way that “one foot on each side” must be given up wherein similar space is occupied on the bottom (App. Br. 11). We agree with Appellants that the arrangement disclosed by the reference shows substantial volume taken up by the placement of the speakers. As we discussed above in relation to the issue of indefiniteness, the word “negligible” is defined by Appellants such that one of ordinary skill in the art would have clearly understood it as referring to such a small space that it differs from the space taken up by the speakers in Ziffer (May).

We also disagree with the Examiner (Ans. 21) that any speaker that is placed in the rear corner position of the trunk would inherently occupy negligible trunk volume. In that regard, we note that the speakers disclosed in Ziffer (May), although occupying the rear corner of the trunk, do not appear to occupy a negligible trunk space. Accordingly, the 35 U.S.C. § 102(a) rejection of claims 1, 3, and 4 as anticipated by Ziffer (May) is not sustained.

4. *35 U.S.C. § 103(a) rejections*

With respect to the rejection of claims 1, 3, and 4 over Ziffer (May) in view of Bazooka, Appellants argue that the Bazooka reference similarly shows the large Bazooka bass tubes extending from front to rear in the trunk (App. Br. 13). Appellants assert that the Examiner has not shown that the disclosed arrangement of the speakers shows a negligible trunk volume

being occupied in either reference (*id.*). We again agree with Appellants and find the Examiner's position (Ans. 21) with respect to finding the space taken up by the prior art speakers as negligible to be unreasonable. As discussed above with respect to the anticipation rejection and as argued by Appellants (Oral Hearing), both Ziffer (May) and Bazooka show speaker placements that occupy substantial trunk volume and cannot teach or suggest the claimed requirements. Therefore, we do not sustain the 35 U.S.C. § 103(a) rejection of claims 1, 3, and 4 over Ziffer (May) and Bazooka.

Regarding, the rejection of claims 1, 3-6, and 8-10 over Ziffer (March) in view of Bazooka, we also disagree with the Examiner's position based on substantially the same reasons stated above. As such, since we find that the Bazooka speakers occupy substantial trunk volume, we do not sustain the 35 U.S.C. § 103(a) rejection of claims 1, 3-6, and 8-10 over Ziffer (March) and Bazooka.

### CONCLUSION

1 On the record before us and in view of our analysis above, we have not sustained the 35 U.S.C. § 112, first paragraph or second paragraph, rejections of claims 1, 3-6, and 8-10. We have also not sustained the 35 U.S.C. § 102(a) rejection of claims 1, 3, and 4, nor the 35 U.S.C. § 103(a) rejections of claims 1, 3-6, and 8-10.

Therefore, the Examiner's decision rejecting claims 1, 3-6, and 8-10 is reversed.

REVERSED